



Photo credit: Bruce Neeb

Reflections on 50 Years of the Clean Water Act

By Michael Cain, Bob Martini, Jenny Oren Washam

Fifty years ago, the Clean Water Act of 1972 (CWA) was passed – a landmark decision to protect the safety, quality, and integrity of water in the United States. The Clean Water Act defined the lives and careers of many WGF members and Wisconsin residents, many of whom played vital roles in implementing the CWA standards and cleaning up Wisconsin waterways. We asked a few of our members to share their perspectives on the CWA, and how it changed the course of their careers in water resources.

Bob Martini: Bob Martini is a member of WGF's Water Resources and Environmental Rules Work Group. Bob served for 32 years with the Wisconsin Department of Natural Resources (WDNR) as Statewide River Protection Coordinator leading efforts to clean up the Wisconsin River and prevent acid rain damage in northern Wisconsin.

How has the Clean Water Act influenced your career in water resources?

The CWA defined my entire 32-year career with WDNR. I supervised work on the cleanup of the Wisconsin River, acid rain, pesticides and nitrates in Central Sands groundwater, and the effects of dams on river health. I learned that science-based natural resources management is the best way to protect and improve the water resource, protect the public's rights in water, and enhance the local economy all at the same time.

How have you seen the Clean Water Act change how water is viewed, valued, and treated in Wisconsin? In the United States?

Over the years the CWA has been attacked and weakened by legislative action, but public support for clean water has never been higher. One of the most important features of the CWA is the "anti-backsliding clause" stating that when water quality is improved, we need to guard against backsliding to the days of burning rivers and extreme pollution that led to the initial passage of the CWA in 1972. Clean water is more important and scarcer than ever before worldwide, it is arguably Wisconsin's most valuable natural resource.

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Reflections

A Message from WGF Leadership

By Fred Clark

Reflections on Green Fire at Year Five

It's hard to believe it's been five years since Wisconsin's Green Fire was formed. For everyone who's become involved there's a story about what led us to become engaged. And most of those stories are based on relationships.

My own engagement started on a sunny Saturday afternoon in September 2017, when the founders of Green Fire met in Baraboo at the Leopold Legacy Center. It was a beautiful day for a ride, and I knew I'd see a lot of old friends and mentors. I couldn't stay long, and I didn't have any expectations. I only learned the next day that after I left the meeting I had been voted onto the Board of Directors. And so began my own engagement with Green Fire. You probably have your own story!

Looking back on a very short five years what has impressed me the most is the sustained commitment from a growing family of conservation professionals, active and retired, who work sometimes every day, to advance our mission on so many different issues in so many ways.

We wondered a lot in the first years, especially after an election and new administration in Madison, if the mission would remain relevant. Events and accomplishments since then have proven we're as relevant and needed today as ever. Simply put, for the folks who value science, Wisconsin's Green Fire provides a science-based focus and expertise that supports their work. For those who don't value science, we're even more needed and we'll be there to advocate for science-based outcomes, whether we're wanted or not.

It's easy to lose sight of how far we've come when we're still running hard

every day. But we've accomplished an awful lot. WGF and our members have influenced conservation and environmental policy on issues like renewable energy, clean water, climate resilience, and cross-cutting wildlife management issues, such as managing landscapes for focal species such as prairie chickens, just to cite a few examples. Because of our deep expertise, WGF members appear regularly in media stories on conservation and environment issues. We recognized that expertise formally this year with the formation of our Wisconsin's Green Fire Science Council.

We also took time this year as an organization, with members of our Science Council and Board of Directors, to look ahead to our next five years. Our team assessment led to great ideas for sharpening our execution and challenged us to focus our talents and efforts on our most important conservation priorities, while operating in more inclusive ways, and building more diverse teams.

Look for more news about our five-year plans in the weeks and months ahead.

Whatever your path to Wisconsin's Green Fire has been and whatever level of involvement you have today, please know that we value your engagement, and we need your support. Let's make the next five years part of a first decade we can all be proud of!

Thanks for all you do,

Fred Clark, Executive Director

Mission

Wisconsin's Green Fire supports Wisconsin's conservation legacy by promoting science-based management of the state's natural resources.

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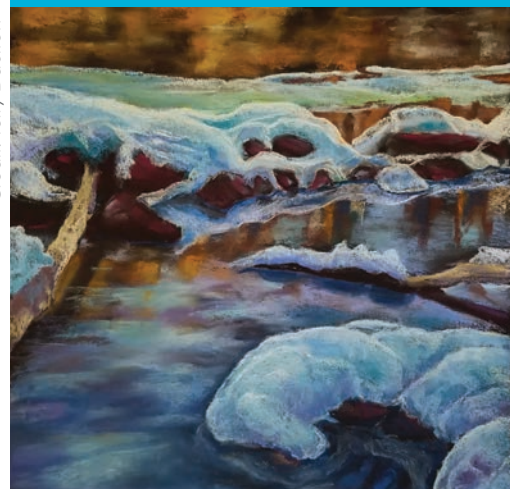
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Credit: Terry Daulton



"Lightning Flash" Work Group Updates



Photo credit: Jeff Richter

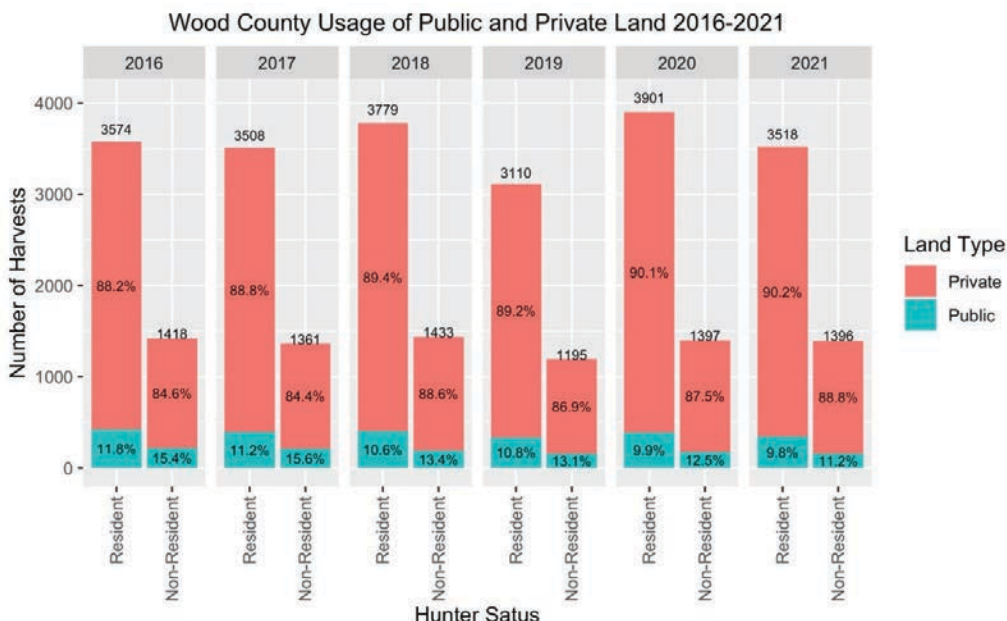
Graduate Student Investigates Deer Harvest Trends in Wisconsin

By Abby Achtenhagen

Abby Achtenhagen is a recent graduate of the Environmental Observation and Informatics Master's program at the University of Wisconsin-Madison Nelson Institute. This is a summary of her summer capstone project working with Tom Hauge, WGF Wildlife Work Group co-chair, analyzing deer harvest data to answer crucial management questions.

This summer, Tom and I worked together to develop questions to understand the decline in Wisconsin hunter participation and identify viable solutions to this decline. These questions investigated the number of residents and non-residents hunting in counties, their hunting habits, the locations and timing of harvests, and where non-resident hunters come from.

To answer these questions, I created graphs, tables, and maps with 2016-2021 deer harvest data in the application RStudio. One series of graphs shows the harvests for county residents and non-residents on public and private land. The trend for Wood County (below) shows that the usage of public land is going down for both residents and non-residents. This trend suggests that well-managed public land will be important in recruiting new hunters and maintaining the current hunter population in the county.



Aspiring Conservation Professionals (ACP) Work Group

As summer draws to a close, ACP work group members are shifting focus to the projects, events, and opportunities for outreach that are coming up this fall. We have started planning the fall issue of Conservation Connections, a newsletter tailored to students and early-career professionals interested in conservation, which is expected to be released early November. Additionally, we have been developing plans to serve as junior mentors to students selected for WGF's new Conservation Pathways scholarship program, and we continue to develop ideas to highlight the experiences of underrepresented people pursuing careers in conservation and environmental science. We are also discussing opportunities to connect with students across more campuses this fall through in-person gatherings and presentations.

Read more about us here:

<https://wigreenfire.org/about/aspiring-conservation-professional-work-group/>

Credit: Terry Daulton



"Lightning Flash" Updates



Photo credit: Fred Clark

Public Trust and Wetlands Work Group

Members of the Public Trust and Wetlands Work Group reviewed Wisconsin Senate Bill 900, which would transfer filled waterfront lands out of the public trust and allow private commercial and residential development on these lands. The work group joined in a veto request to Governor Evers, which he ultimately issued. Additionally, WGF is co-sponsoring a boat tour Field Forum with Milwaukee Riverkeeper in September to discuss public trust issues like those highlighted by SB 900, including social justice. Work group co-chair Michael Cain will be a speaker during this boat tour and will be writing a review of public trust issues for the *Wisconsin Lawyer*, the State Bar of Wisconsin's magazine.

Ron Grasshoff, also a work group co-chair, is leading the work group's participation in the Strategic Analysis of Coastal Management on the Door Peninsula, an effort led by the Wisconsin Department of Natural Resources.



Photo credit: Milwaukee Riverkeeper

Visit WGF's website at wigreenfire.org/our-work to keep up to date on WGF's work across Wisconsin

Bring a Friend! WGF Hosts Fall 2022 Conservation Socials

We are excited to announce the return of our fall 2022 Conservation Social series! These casual, free evening gatherings will take place across Wisconsin through September and will be times for WGF members and conservation enthusiasts across the state to connect and socialize over local drinks and food. Each social will offer time to learn about WGF's work on behalf of Wisconsin's natural resources, and how to get involved with us!

We will be in six communities across the state in September, each at venues with Covid-safe outdoor seating. These socials are free and open to the public, and we encourage you to bring a friend! Visit wigreenfire.org/events to register today.

WISCONSIN'S GREEN FIRE
Fall Conservation Socials

2022
APPLETON
MADISON
MANITOWISH
WATERS
MILWAUKEE
STEVENS POINT
WASHBURN

People | Food | Science | You!

- ▶ **Madison** - Lake Monona and Goodman Community Center (Wednesday, September 13th, 4:00-7:00 PM)
 - PFAS Discussion, 4:00 - 5:00 PM
 - Conservation Social, 5:30 - 7:00 PM
- ▶ **Milwaukee** - City Lights Brewery (Wednesday, September 14th, 5:30-7:00 PM)
- ▶ **Washburn** - South Shore Brewery and Tap House (Wednesday, September 21st, 5:30-7:00 PM)
- ▶ **Appleton** - North Loop Farm (Thursday, September 22nd, 5:00-7:00 PM)
- ▶ **Stevens Point** - Sunset Point Winery (Wednesday, September 28th, 5:30-7:00 PM)
- ▶ **Manitowish Waters** - North Lakeland Discovery Center (Thursday, September 29th, 5:30-7:00 PM)

Women and Water: Honoring Female Leaders in Water Protection

By Terry Daulton



The view from Mary Burns' Iron County weaving studio is dominated by lush wetlands and the glimmering Manitowish River. It is no wonder, with this backdrop, that water features in much

of Mary's work, as it does in the writings of her husband, the well-known Northwoods naturalist, John Bates.

In recent years, Mary has designed portraits of women, first with her exhibit *Ancestral Women* featuring Indigenous women from each Wisconsin tribe and now with *Women and Water*, an exhibit that honors women from around the globe who have heroically protected water. Using her high-tech Jacquard loom, Burns combines artistic sense of subject, and deep knowledge of weaving patterns and design.

In Mary's words, "This exhibit celebrates and honors water by portraying women who work with it, protect it and advocate for it. Featured are scientists, water-walkers, teachers, farmers, activists and healers, who all hold deep connections with water. It is our hope that this globally inspired exhibit will help develop and strengthen our own ties with water and inspire actions to further protect our waters."

When asked which of these portraits might be most closely linked to the Clean Water Act, Mary had



Weaving of Rachel Carson. Credit: Mary Burns

no hesitation, suggesting Rachel Carson (portrait featured here). Author of *Silent Spring*, Carson was also a public servant, working for the Bureau of Fisheries in the U.S. Department of Commerce and later with the U.S. Fish and Wildlife Service on both policy and public education. Her work made lasting impacts

beginning in the 1960s, helping inspire the formation of the Environmental Defense Fund and the U.S. EPA, the first Earth Day, and revisions to the Clean Water Act in 1972.

John Bates wrote the text which accompanies Burns' portrait of Carson: "Carson remains an example of what one committed individual can do to protect the rights of all life and how while one's work may be furiously attacked; it can shift the future." Those words express a timely message as today we face dis-information on climate change and waning reliance on science in policy making.

In another portrait (below), Grandmother (Nakomis) Josephine Mandamin, also known as *Biidaasige-ba*



Weaving of Grandma Josephine Mandamin, or *Biidaasige-ba*. Credit: Mary Burns

("the one who comes with the light"), is one of the originators of Water Walks in which Native American women lead ceremonial journeys, carrying a vessel filled with water to teach respect for water, Earth's natural systems, and the needs of future generations. She completed 13 walks, a distance that would have extended nearly halfway around the

circumference of the Earth and became a deeply respected water-rights activist.

Josephine shared that "Water has to live, it can hear, it can sense what we're saying, it can really, really, speak to us. Some songs come to us through the water. We have to understand that water is very precious . . . That's our responsibility, our role, and our duty, to pass on the knowledge and understanding of water, to all people, not just Anishinabe people, but people of all colors."

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Weaving of Monica Lewis-Patrick.
Credit: Mary Burns

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A third portrait (left) is of Monica Lewis-Patrick, one of the founders and now CEO of “We the People of Detroit,” an organization begun in 2009 to empower Detroit residents on civil rights issues, including water access. Known in the environmental justice movement as a “Water Warrior,” she works to create a pathway towards access to clean, safe, and affordable water for all.

Lewis-Patrick is a co-author of the 2016 book, “Mapping the Water Crisis: The Dismantling of African-American Neighborhoods in Detroit,” documenting the effects of political and economic policies and their relationship to race in Detroit. “We didn’t call ourselves into this fight. We

tell folks that we didn’t choose water. Water chose us. In the divinity of water, water was before everything else was. We see ourselves as called into this great layer of warrior women that are fighting for water all around the globe, from Cochabamba to the Arab Spring, from Ireland to the Navajo Nation, from all over these Great Lakes where we have what I call ‘bad revolutionary sisters’ who have decided that not only will *they* drink, but that their children’s children’s children will drink.”

For more information on Mary Burns work, and the diverse women she honors visit <https://manitowishriverstudio.com/women-water/>

WGF Holds Summer 2022 Field Forum Series

By Jenny Oren Washam

This summer, WGF hosted a series of Field Forums across Wisconsin that offered WGF members and conservation enthusiasts the chance to experience conservation in action around the state. In partnership with fellow conservation organizations, policy makers, and local stakeholders, our field forums provided members opportunities to learn about PFAS in central Wisconsin, howl for gray wolves in northern Wisconsin, see the impacts of the Enbridge Line 5 pipeline through Iron and Ashland counties, celebrate the 50th anniversary of the Clean Water Act by paddling the Wisconsin River, and experience

climate resiliency efforts in Wisconsin’s Driftless Area. To close out the series in September, we will host a boat tour of Milwaukee’s waterfronts focused on the history and policy issues around these areas.

Over 90 individuals have attended our Field Forums since June 2022, ranging from students and University researchers and professors, tribal natural resources staff and conservation advocates, conservation professionals, and members of the media. Visit our website to learn more at wigreenfire.org/2022fieldforums.



Tom Jerow, John Robinson, and Mark Thimke during our Wisconsin’s Forever Chemical Crisis – Local Impacts and Community Action Field Forum on June 9th in Wausau, WI. Photo credit: Fred Clark



The group for our Co-existing with Wolves – History, Biology, and Policy Field Forum on August 4th in Cable, WI. Photo credit: Jenny Washam



The group for Our History Meets Our Future - Land Conservation and Climate Resilience in the Coon Valley Watershed Field Forum on August 11th in Coon Valley, WI. Photo credit: Fred Clark



PROFILE IN CONSERVATION – Tom Jerow

Tom Jerow is the incoming president of Wisconsin's Green Fire. Tom has served on WGF's board since the group's founding in 2017, and he is a member of two work groups: Water

Resources and Environmental Rules, and Public Trust and Wetlands. Tom retired from the Wisconsin Department of Natural Resources in 2013 when he served as Northern Region Water Leader. He worked at WDNR for 34 years, primarily in the water program and in solid waste.

We asked Tom, a native of Michigan's Upper Peninsula, about his path from a University of Wisconsin-Stevens Point soil science degree to a career with the WDNR, and persuaded him to share a light-hearted, on-the-job story.

Why did you pick soils for a major in college? How did you decide to take a job with the WDNR immediately after graduation?

At UW-Stevens Point you are required to take introductory classes in a broad range of natural resources fields and topics. I actually started as a forestry major but was fascinated with the living biome in the soil. To enhance my professional credentials, I took graduate-level hydrogeology courses, quickly learning the interconnectedness of soil and water.

My dream job was to map soils out west.. A professor suggested I apply for a job at WDNR in solid waste management, and because of his great reference, I was hired before graduating!

Do you have a memorable experience on the job that makes a good story at WGF events?

For about one-third of my career, I collected water samples at potentially contaminated sites in northern Wisconsin. We followed U.S. Environmental Protection Act protocols carefully. Due to the sensitive nature of the sampling, we were not allowed to use ANY mosquito repellent. I learned to dress in layers just to protect my skin from the hordes of mosquitoes. I would sometimes wear my hazmat suit in hot muggy weather just to keep the blood in my body from being drained (see photo).

What was the impact of the federal Clean Water Act on the waters of Wisconsin?

The Clean Water Act of 1972 was implemented over time to allow industry and municipalities to plan, adapt, and invest in pollution prevention infrastructure. Municipalities started by getting literal chunks out of wastewater to be discharged to streams and lakes. From that primary treatment, they advanced to secondary treatment, which further cleaned the wastewater.

Industry and municipalities also removed phosphorus, which is responsible for intense algae blooms on lakes and rivers. Many of our water bodies still have intense algae blooms that are caused primarily by agriculture and urban stormwater runoff – a problem yet to be solved.

What is your advice for aspiring professionals and students who are interested in careers in conservation and protection of natural resources?

I so admire the young professionals entering the fields of natural resources and environmental protection today. My advice is to take time to enjoy the outdoors. I practice forest bathing, which is just really taking a walk in the woods, once or twice a week to bring things back into perspective. It's all about balancing your work with some nature-based recreation. Find something outdoors that you love to do, and just do it! To view a longer version of

Tom's profile, please visit WGF's blog at wigreenfire.org/our-work.



Tom wears a hazmat suit while collecting water samples in northern Wisconsin.

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Michael Cain: *Michael Cain is co-chair of WGF's Public Trust and Wetlands Work Group. Michael was the lead attorney for the WDNR wetland and surface water regulatory program for 34 years, retiring in 2009. He was involved in drafting and developing laws and regulations protecting Wisconsin's waters under the Public Trust Doctrine.*

How has the Clean Water Act influenced your career in water resources?

In 1970 I was a Biology student at the University of Wisconsin - Stevens Point and was fully aware of the serious pollution of Wisconsin's water resources. I participated in the first Earth Day marches that year and was determined to go to law school and pursue a career to help restore Wisconsin's natural resources. The Clean Water Act provided the basis for beginning to clean up the toxic messes that had evolved with "modern" industrialization.

How have you seen the Clean Water Act change how water is viewed, valued, and treated in Wisconsin? In the United States?

The Milwaukee River is an excellent example of the problems that were created by historical neglect and disregard for Wisconsin's water resources. As historian John Gurda wrote in *Milwaukee, A City Built on Water*, "Sewage overflows, urban runoff, industrial discharges and new pollutants combined to recreate the "river nuisance" in a



*Kayak tour on Milwaukee River.
Photo credit: Milwaukee Riverkeeper*

new century... A visiting architecture professor called the stream an "open sewer" in 1961."

The river cleanup began after the CWA was implemented, and by the 1980s, the river was clean enough that the City of Milwaukee worked with WDNR to create a publicly accessible Riverwalk. Today, the Milwaukee River and Riverwalk are vibrant amenities, with restaurants, boat docks, condominiums, and public art spaces gracing the riverbanks.

As we continue to work for clean water, the successes of the Clean Water Act and its companion legislation from the 1970s demonstrate that progress can be made if citizens continue to press for improvements to these natural resources.

To view longer versions of Bob and Michael's Clean Water Act reflections, please visit WGF's blog at wigreenfire.org/our-work.